

## **Summary of Cancer Incidence and Mortality for Pickens County, SC**

### ***Cancer Incidence in Pickens County***

The first step in the analysis of cancer data for this county was to look at the number of new cancer cases diagnosed in the county and compare this to the number of cancer cases expected in this county (see Table 1). This first step determines if there is anything unusual with cancer patterns in the area. The number of "expected" cancer cases is calculated by using South Carolina cancer rates and applying them to the population of each county.

Table 1 shows what types of cancer were diagnosed in Pickens County from 1996-2000, and how many cancer cases were expected. Overall, there were fewer cases of cancer than expected in Pickens County. The most common types of cancer in this county were lung, colon/rectum, female breast, and prostate cancers. These types of cancer are also the most common cancers occurring across all of South Carolina.

The analysis revealed one specific type of cancer (**Bladder**) where the number of cases was significantly higher than expected. Smoking is the primary risk factor for bladder cancer. Smokers are more than twice as likely to get bladder cancer compared to nonsmokers. Another risk factor for bladder cancer is chronic bladder inflammation, such as from urinary infections or kidney stones. Also exposure to certain industrial chemicals can increase the risk of bladder cancer.

### ***Cancer Deaths in Pickens County***

To assess cancer deaths in Pickens County, cancer mortality data from 1998-2002 were used. The process used to analyze new cancer cases was also used to analyze cancer deaths. Table 2 shows the number of cancer deaths that occurred in Pickens County and the number expected. Overall, the number of cancer deaths that occurred was less than expected in Pickens County.

The analysis revealed no specific types of cancer where the number of deaths was significantly higher than expected.

### ***Conclusions***

To summarize, overall there were fewer cases of cancer occurring in Pickens County than expected. The number of bladder cancer cases was significantly higher than expected in Pickens County. Life-style related behaviors, mainly smoking, are the primary risk factors for bladder cancer, therefore a cluster is not likely. Overall, there were a fewer number of cancer deaths in Pickens County than were expected.

In order for a true cancer cluster to exist, the number of cancers occurring must be more than would be expected by chance. Along with statistical testing, there are several other criteria that determine whether a true cancer cluster exists. First, a cancer cluster would more likely involve rarer types of cancer rather than more common cancers like lung or prostate cancers. Also, a cancer cluster would occur with one specific type of cancer rather than having excesses in several different types of cancer.

Taking all these criteria into consideration, the South Carolina Central Cancer Registry determined there is no evidence of cancer clustering in Pickens County.

For questions about this report, please contact Susan Bolick-Aldrich, MSPH, Director of the South Carolina Central Cancer Registry.

### ***Report provided by:***

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**Table 1. Analysis of New Cancer Cases in Pickens County, 1996-2000**

<b>Site</b>	<b>Observed</b>	<b>Expected</b>	<b>Observed/Expected</b>	<b>Chi-SquareTest*</b>
Prostate	389	381.18	1.02	0.16
Lung/Bronchus	343	353.74	0.97	0.33
Breast (Female)	267	326.54	0.82	10.86
Colon/Rectum	221	258.92	0.85	5.55
<b>Bladder</b>	<b>107</b>	<b>88.14</b>	<b>1.21</b>	<b>4.03</b>
Melanoma	94	77.99	1.21	3.29
Non-Hodgkin Lymphoma	77	73.74	1.04	0.14
Kidney/Renal Pelvis	58	56.85	1.02	0.02
Leukemia	52	43.81	1.19	1.53
Uterus	47	53.44	0.88	0.78
Oral/Pharynx	44	64.80	0.68	6.68
Brain/CNS	40	30.85	1.30	2.72
Pancreas	36	50.46	0.71	4.14
Ovary	29	36.34	0.80	1.48
Larynx	27	27.89	0.97	0.03
Cervix	24	30.88	0.78	1.53
Thyroid	22	24.53	0.90	0.26
Esophagus	21	30.84	0.68	3.14
Stomach	20	35.59	0.56	6.83
Multiple Myeloma	20	25.25	0.79	1.09
Hodgkin Disease	16	11.18	1.43	2.07
Soft Tissue	13	12.60	1.03	0.01
Testis	10	10.23	0.98	0.01
Other Female	9	11.40	0.79	0.50
Liver	7	15.80	0.44	4.90
Other Digestive	6	9.60	0.63	1.35
Other Respiratory	6	8.11	0.74	0.55
Small Intestine	6	6.43	0.93	0.03
Anus/Anal Canal	3	6.52	0.46	1.90
Unknown/III-Defined	56	NA	NA	NA
All Sites	2108	2250.26	0.94	8.99

Excludes in situ cases of cancer to allow for comparison.

Cancer sites with less than 5 cases of cancer expected are not analyzed due to the unreliability of statistical tests based on small numbers. These sites have been removed from this table.

\*The Chi-Square statistical test allows us to determine if the difference between what is observed and what is expected is significant. If the value is greater than 3.84, then we are 95% confident that the observed number of cases is significantly different from the expected number of cases.

Prepared by: SC Central Cancer Registry, Office of Public Health Statistics and Information Services, Department of Health and Environmental Control, 2600 Bull St., Columbia, SC 29201

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**Table 2. Analysis of Cancer Deaths in Pickens County, 1998-2002**

<b>CancerSite</b>	<b>Observed</b>	<b>Expected</b>	<b>Observed/Expected</b>	<b>Chi-SquareTest*</b>
Lung/Bronchus	320	307.61	1.04	0.50
Colon/Rectum	85	104.17	0.82	3.53
Female Breast	76	75.75	1.00	0.00
Prostate	53	75.69	0.70	6.80
Pancreas	49	57.96	0.85	1.39
Unknown/III-Defined	46	64.06	0.72	5.09
Leukemia	36	37.27	0.97	0.04
Non-Hodgkins Disease	33	38.09	0.87	0.68
Brain/CNS	26	26.77	0.97	0.02
Bladder	25	19.73	1.27	1.40
Ovary	23	23.38	0.98	0.01
Multiple Myeloma	19	24.19	0.79	1.11
Esophagus	18	25.86	0.70	2.39
Kidney/Renal Pelvis	18	21.55	0.84	0.58
Liver	17	20.04	0.85	0.46
Melanoma Of Skin	14	12.05	1.16	0.32
Uterus	11	11.80	0.93	0.05
Cervix	10	10.51	0.95	0.02
Stomach	9	26.64	0.34	11.68
Oral/Pharynx	7	20.16	0.35	8.59
Larynx	5	8.37	0.60	1.36
Soft Tissue	5	7.58	0.66	0.88
Other Skin	3	5.49	0.55	1.13
All Sites	942	1052.71	0.89	11.64

Excludes in situ cases of cancer to allow for comparison.

Cancer sites with less than 5 cancer deaths expected are not analyzed due to the unreliability of statistical tests based on small numbers. These sites have been removed from this table.

\*The Chi-Square statistical test allows us to determine if the difference between what is observed and what is expected is significant. If the value is greater than 3.84, then we are 95% confident that the observed number of cases is significantly different from the expected number of cases.

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